DUKE POWER COMPANY
POWER BUILDING
422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28242

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

December 23, 1981

TELEPHONE: AREA 704
373-4083

Mr. J. P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Re: McGuire Nuclear Station Unit 1
Docket No. 50-369

Dear Mr. O'Reilly:

Please find attached Reportable Occurrence Report RO-369/81-185. This report concerns Technical Specification 3.4.1.4, "Two Residual Heat Removal (RHR) loops shall be operable and at least one RHR loop shall be in operation." This incident was considered to be of no significance with respect to the health and safety of the public.

This report is being submitted three working days late. We apologize for any inconvenience this may have caused.

Very truly yours,

William O. Parker, Jr.

PBN:scs
Attachment

cc: Director
Office of Management & Program Analysis
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Records Center
Institute of Nuclear Power Operations
1820 Water Place
Atlanta, Georgia 30339

Mr. P. R. Bemis
Sr. Resident Inspector - NRC
McGuire Nuclear Station

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DUKE POWER COMPANY
MCGUIRE NUCLEAR STATION

REPORTABLE OCCURRENCE REPORT NO: 81-185

REPORT DATE: December 23, 1981

FACILITY: McGuire Unit 1, Cornelius, North Carolina

IDENTIFICATION: Automatic Valve Closure Causing Loss of Shutdown Decay Heat Removal

INTRODUCTION:

On November 18 with Unit 1 in Mode 5, cold shutdown, both residual heat removal (ND) loops were rendered inoperable when an inlet isolation valve inadvertently shut. Concurrently, a pressurizer high temperature alarm was received. ND pump A was immediately stopped to protect the pump, and action to restore the system to operation was initiated. The valve was reopened and the system was operating after a twenty-two minute shutdown.

Investigation revealed that Construction personnel working in accordance with a shutdown request had disconnected the pressurizer vapor space temperature sensor signal cable. This signal is used as a diverse means of providing overpressure protection to the ND system. By design, the pressurizer vapor space signal provides an open permissive signal to the valve's actuator at 475°F decreasing. It also functions to automatically close the valve at 475°F increasing. When the signal lead was disconnected a fail-safe characteristic caused the valve actuator to close the valve.

Since the on duty Shift Supervisor provided authorization to proceed with the work associated with the adequately documented shutdown request, this incident is attributed to personnel error.

EVALUATION:

When the alarms associated with the incident occurred the Shift Supervisor immediately realized the mistake and attempted to stop the work proceeding in the reactor building through the use of the site general announcing system. An operator was also dispatched to the scene. These efforts were effective in that the construction workers responded by reconnecting the leads, which cleared the problem.

The controlling procedure at the time of the incident was "draining the Reactor Coolant System." One step in the procedure requires that the valve operator power breakers be locked open, rendering the two ND suction valves inoperable. Had the draining operation proceeded beyond that step in the procedure the incident would not have occurred.

CORRECTIVE ACTION:

Operators have been cautioned about the possibilities of ND isolation due to actuation of protective features. Procedural improvements are continuously under study.